

REMARKS

The Office Action mailed July 17, 2002 has been received and the Examiner's comments carefully reviewed. Claims 2, 3, 11 and 12 were objected to, but the Examiner indicated these claims would be allowable if rewritten in independent form. Applicants thank the Examiner for this notification. Claims 1, 3, 10, and 12 have been amended. Applicant has included herewith a document entitled, "VERSION WITH MARKINGS TO SHOW CHANGES MADE" to indicate how the claims have been amended. Claims 20-23 have been added. No new subject matter has been added. Claims 2 and 11 have been cancelled. Claims 1, 3-10, and 12-23 are currently pending. For at least the following reasons, Applicant respectfully submits that the pending claims are in condition for allowance.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1, 4-10, and 13-19 under 35 U.S.C. §102(b) as being anticipated by Kawamoto et al. (U.S. Patent 5,613,740). Applicant respectfully traverses these rejections, but has amended claims 1 and 10 to advance this application to allowance. Applicant reserves the right to pursue the original subject matter via a continuation application.

Kawamoto discloses a brake system for a vehicle. As shown in FIG. 2, the brake system includes a master cylinder M for outputting a liquid pressure, an electric actuator 3(FL) for outputting a liquid pressure, and a switch-over valve 4(FL) for switching the connection and disconnection between the master cylinder M and a braking device B(FL). The system's switch-over valve 4 is configured to be switchable between a state in which the brake B is in communication with the electric actuator 3 and not the master cylinder M, and a state in which the brake B is in communication with the master cylinder M and not the electric actuator 3. As can be seen by the switch-over valve 4 schematic, Kawamoto teaches a configuration wherein fluid pressure is provided to the brake B through either only the master cylinder M, or only the electric actuator 3.

I. Claims 1 and 4-9

Claim 1 recites a hydraulic braking system having a primary valve assembly and a secondary valve assembly. The secondary valve assembly includes an actuator and a spool valve. The actuator is configured to engage the spool valve to assist the braking output produced by the

primary valve assembly. The specification states that the secondary valve assembly assists the primary valve assembly during brake actuation by increasing the pressure applied to the primary valve assembly, thereby increasing the overall braking output of the system. Pages 9-10, lines 24-1; page 15, lines 21-24. In addition, the secondary valve assembly can reduce the pressure being produced by the primary valve assembly to reduce the overall braking output. Pages 16, lines 3-5.

Kawamoto does not disclose a braking system having a primary valve assembly and a secondary valve assembly configured such that the secondary valve assembly assists the braking output produced by the primary valve assembly, as defined by the specification and recited in claim 1. Rather, Kawamoto discloses a configuration having independent braking outputs produced by either only the master cylinder M, or only the electric actuator 3. The electric actuator 3 is not configured to assist, that is increase or decrease, the output produced by the master cylinder M. Instead, Kawamoto has a switch 4 that separates the output of the master cylinder M from the electric actuator 3.

Because Kawamoto does not disclose the structural limitations of a secondary valve assembly that assists the braking output produced by the primary valve assembly, Applicant respectfully submits that claim 1 is patentable. Claims 4-9 depend upon claim 1 and are therefore also patentable.

II. Claims 10 and 14-19

Claim 10 recites a brake valve for controlling a braking output including a primary valve assembly and a secondary valve assembly. The secondary valve assembly includes a solenoid actuator and assists the braking output produced by the primary valve assembly. For similar reasons as discussed with regards to claim 1, Applicants respectfully submit the claim 10 is patentable. Claims 13-19 depend upon claim 10 and are therefore also patentable.

Allowable Subject Matter

The Examiner objected to claim 2, 3, 11 and 12 as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner is thanked for this notification.

III. New claims 20 and 21

New claim 20 incorporates the subject matter of claim 2 and base claim 1. Claim 3 has been amended to depend from claim 20. New claim 21 incorporates the subject matter of claim 11 and base claim 10. Claim 12 has been amended to depend from claim 21. Applicants respectfully submit that claims 3, 12, 20 and 21 are in condition for allowance and notification to that effect is requested.

IV. New claims 22 and 23

New claims 22 and 23 depend upon independent claims 1 and 10 respectively. In light of the above comments with regards to claims 1 and 10, Applicant respectfully submits that dependent claims 22 and 23 are patentable.

SUMMARY

It is respectfully submitted that each of the presently pending claims (claims 1, 3-10, and 12-23) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicant's representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

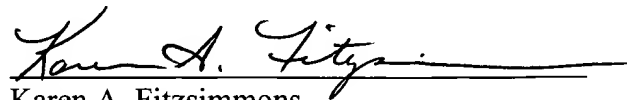
Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicant reserves the right to raise these arguments in the future.



Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claims 2 and 11 have been cancelled.

Claims 1, 3, 10, and 12 have been amended as follows:

1. (Amended) A hydraulic braking system for supplying a braking output to a vehicle having at least one wheel, the braking system comprising:
 - (a) a primary valve assembly configured to receive a manually controlled input that varies the braking output, the primary valve assembly including:
 - (i) a first spool valve configured to vary the braking output according to the manually controlled input; and
 - (b) a secondary valve assembly [integral with the primary valve assembly, the secondary valve assembly being] configured to receive input signals from a programmable electronic controller, the secondary valve assembly including:
 - (i) a second spool valve configured to operate with the primary valve assembly; and
 - (ii) an actuator for engaging and actuating the second spool valve according to the input signals received from the programmable electronic controller such that the second spool valve [modulates] assists the braking output produced by the primary valve assembly.
3. (Amended) The hydraulic braking system of claim [2] 20, wherein:
 - (a) the second spool valve further being constructed and arranged to modulate between the secondary valve assembly second and intermediate positions such that the secondary valve assembly decreases the braking output produced by the primary valve assembly.

10. (Amended) An electronically enhanced brake valve for controlling a braking output to a vehicle having at least one wheel, the brake valve comprising:
- (a) a primary valve assembly configured to receive a manually controlled input that varies the braking output, the primary valve assembly including:
 - (i) a first spool valve configured to vary the braking output according to the manually controlled input; and
 - (b) a secondary valve assembly [integral with the primary valve assembly, the secondary valve assembly being] configured to receive input signals from a programmable electronic controller, the secondary valve assembly including:
 - (i) a second spool valve configured to operate with the primary valve assembly; and
 - (ii) a solenoid actuator having a coil and an armature for engaging and actuating the second spool valve according to the input signals received from the programmable electronic controller such that the second spool valve [modulates] assists the braking output produced by the primary valve assembly.
12. (Amended) The brake valve of claim [11] 21, wherein:
- (a) the second spool valve further being constructed and arranged to modulate between the secondary valve assembly second and intermediate positions such that the secondary valve assembly decreases the braking output produced by the primary valve assembly.

New claims 20-23 have been added.